Homework 2 Database concepts

1. Define the following terms:

   (a) Entity [1]

   (b) Primary key [1]

   (c) Secondary key [2]

   (d) Foreign key [2]

2. A cinema club shows up to three screenings of films on a given day. They need a database to keep track of which films have been shown on which dates. It has been suggested that they use one table (relation) about the films they show, which will hold the following data:

   FilmID, Title, Duration, Male Lead, Female Lead, Date shown, Time shown, Tickets sold.

   (a) Give a reason why this is not a satisfactory solution. [1]

   (b) Show how the data could be reorganised into **four** relations, using the notation

   Entity name (attribute1, attribute2, attribute3 …)

   An underscore indicates the primary key. The entities that have been identified are Film, Actor, ActorInFilm and Showing. [8]

(c) Identify **one** foreign key and **one** composite key in any of the relations. [2]

(d) Complete the Entity-Relationship diagram below to show the degree of the relationships between the entities (one-to-many, etc.) [3]

[Total 20 Marks]